ELECTION TECHNOLOGY COUNCIL

Ensuring Durability with Thermal Paper Records

Overview:

In recent years, the voting system industry has responded to concerns from their customers and marketed a paper based auditing mechanism as a means for voters to verify their vote selections. Typically, this industry response has taken the form of a thermal reel-to-reel printer attachment and is commonly referred to as a Voter Verifiable Paper Audit Trail (VVPAT). As the leading association for voting system manufacturers in the United States it is important to document industry practices and their ability to satisfy all appropriate document retention schedules.

Records Preservation Practices:

Many of the local officials who conduct elections are also in charge of maintaining other important archives for their local governments. Many of their archival methods are geared towards the preservation of vital public documents, such as land records, which must be maintained in perpetuity. Election records are different from other records as they are subject to document retention schedules and normally scheduled for destruction after a minimum period of 22 months provided no outstanding litigation exists and no public information requests must be satisfied.

When examining the usage of thermal paper records, mainly in the form of a Voter Verifiable Paper Audit Trail (VVPAT), the industry examined the primary question of whether thermal paper satisfies the federal standard for durability. The following terms describe the common characteristics for the quality of thermal paper records currently deployed in the field and their ability to withstand a 22-24 month preservation period:

Storage Requirements:

Conditions: Thermal paper records, once imaged, should be stored in areas that protect from the following conditions:

- Prolonged periods exposed to ultraviolet light (i.e., direct sunlight);
- Records should be stored in areas away from prolonged exposures to internal lighting;
- Humid or wet environments over prolonged periods of time;
- Contact with plasticizers;
- Contact with oil, fat, alcohol, fuels, etc.;
- Contact with carbonless or carbon paper;

Humidity: Recommended storage requirements include a constant humidity threshold between 45 and 60% relative humidity;

Temperature: Thresholds should not exceed 25 degrees Celsius (77 degrees Fahrenheit) at the maximum and not to drop below 18 degrees Celsius (64 degrees Fahrenheit);

Shelf-life: Unimaged thermal paper records should be stored under the same conditions as outlined above and are adequate for a period of three years;

The storage criteria as outlined above and on the previous page are recognized as best practices in the field of records management and represent known hazards for all paper-based documents, not limited to those on thermal paper.

Findings:

Provided the basic thresholds are satisfied as outlined above, thermal paper records are able to withstand a minimum preservation period of (5) five years which more than satisfies all appropriate federal document retention periods. This preservation period reflects the minimum level of industry practices and does not reflect additional statements or achievements of industry providers to exceed additional document preservation thresholds as required under applicable state laws. It is recommended that all vendor specific guidelines be followed for thermal paper products including inventory controls such as having supplies ordered and used on a first-in, first-out (FIFO) consumption basis. In addition, both imaged and non-imaged thermal paper documents should be stored out of direct sources of light which is a business practice applied to all non-thermal paper records storage.

About the Election Technology Council (www.electiontech.org)

The Election Technology Council (ETC) consists of companies that offer voting system technology hardware products, software and services to support the electoral process. The ETC represents manufacturers of the voting equipment used by over 90% of the population in the United States. These companies have organized as an industry trade association to work together to address common issues facing the industry. Current members of the Election Technology Council include Election Systems & Software, Hart InterCivic, Premier Election Solutions and Sequoia Voting Systems.

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